

### **Amendments to the Specification:**

Please replace the paragraph beginning at page 5, line 17 and ending at page 5, line 30, with the following rewritten paragraph:

-- In another aspect of the invention there is provided a ~~diffraction-binding assay~~ method for detecting simultaneously at least two analytes[[,]] in a medium using light diffraction, comprising:

providing a substrate including a surface and on said ~~the~~ the surface a first pre-selected pattern of a first analyte-specific receptor and at least a second pre-selected pattern ~~comprising of~~ comprising of a second analyte-specific receptor, wherein each said pre-selected pattern gives rise corresponding to a pre-selected diffraction pattern distinct from each all other diffraction patterns;

contacting said ~~the~~ the surface of the substrate with the medium for a sufficient time to permit pre-selected analytes present in ~~solution~~ the medium to bind with to their associated analyte-specific receptors; and illuminating said ~~the~~ the substrate and detecting, at a position spaced from the substrate surface, an image of light ~~diffracted light~~ from said the substrate surface and analysing said ~~the image of~~ the image of diffracted light for presence of [[a]] one or more of the pre-selected diffraction image patterns representative of binding of one or more analytes with to their associated pre-selected pattern of analyte-specific receptors and identifying from said ~~the diffraction image of diffracted light~~ the diffraction image of diffracted light one or more analytes present in said ~~the~~ the medium. --

Please replace the paragraph beginning at page 8, line 12 and ending at page 8, line 23, with the following rewritten paragraph:

-- The present invention provides a method for the assay of multiple analytes on the same general region of a substrate using light diffraction. The

method takes advantage of the unique correspondence between a given receptor pattern and its diffraction ~~image~~ pattern, in order to assess the presence or absence of specific analytes. Analyte-specific receptors are laid out on the surface of a solid substrate, either directly or through an intervening layer, such that each type of receptor defines a unique pattern. For the purpose of this patent, two patterns are considered 'distinct' or 'unique' if they correspond to diffraction patterns distinguishable from each other. The solid substrate may be transparent, partially transparent, or reflecting at the wavelength of the incident illumination. In the case of a transparent substrate, analyte-specific receptors may be patterned on one or both surfaces of the substrate.--